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MAR 23 1993

FEDERAL COMMUNICATIONS COMMISSION

Before the

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ment Association (220 SMA, which is the only repeater council in the entire nation that has filed comments opposing the proposed non-repeater subband). SMA President Fortney acknowledged that in developing a 1.25 meter band plan, SMA "...responded to the majority of its members by granting what they wanted without adequate consideration for the rights of others."[2] (Emphasis added)

Fortney's main contention in the above-quoted passage was that no other repeater council failed to consider the needs of other users as SMA did. Perhaps that explains why SMA is alone among the nation's repeater coordinators in opposing the Commission's proposed 150 kHz non-repeater subband in the 1.25 meter band.

However, the uniqueness of SMA's position does not eliminate the need for a federal rule reserving a portion of the band for non-repeater use. The record in this proceeding clearly illustrates what can happen when a repeater coordinator attempts to accommodate non-repeater operations on a voluntary basis--without the support of a federal rule reserving part of the band for such uses.

2. We said in our comments that there will be no uniform nationwide weak-signal subband if the Commission does not create one by federal rule, because not all repeaters will vacate the weak-signal subband voluntarily--even if every local repeater coordinator asks them to do so.

In commenting in favor of the non-repeater subband, the recently retired 222 MHz repeater coordinator for the Tri-State Amateur Repeater Council (TSARC) emphasized that in his area the owners of several repeaters have simply refused to relocate out of the

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[2] See the separate comments filed by James Fortney on behalf of the Valley Emergency Radio Association, at page 9. Although he filed comments on behalf of another organization, he is the president of 220 SMA.

weak-signal subband, even when offered frequencies higher in the band by TSARC. We would urge the Commission to make special note of those comments, filed by Thomas A. Richmond, because he is apparently the only commenter who has actually attempted, as a repeater coordinator, to relocate repeaters out of the nationally recognized weak-signal subband without the authority of a federal rule to back him up--and he concluded that it cannot be done!

Richmond pointed out that in the New York-New Jersey-Connecticut tri-state area, TSARC has followed the national band plan recognized by the American Radio Relay League (ARRL), adopting a local band plan that sets aside 222.0-222.150 MHz for non-repeater use. However, he also pointed out that some of the repeaters are simply refusing to move. Richmond made the following observation:

> As the recently retired 222 MHz frequency coordinator for TSARC, the recognized amateur repeater coordinator in the NYC tri-state area, I can ASSURE you that repeater and auxiliary operations in the lower 150 kHz WILL NOT CEASE UNTIL LEGISLATION FORCES IT TO DO SO.... Only FOUR systems remain in our area with input frequencies below 222.150MHz, and NONE in New England that I am aware of. Of those four, two have refused re-coordination attempts out of the exclusion zone in the past eighteen months, citing no LAW existing that makes their operation illegal. They deny any rights of experimental operators to utilize 222 MHz in doing so.[3] (Emphasis his)

Richmond further pointed out that the lack of a federal rule has led to "tension between disparate users" during periods of unusual activity and enhanced propagation, a problem TSARC is powerless to solve on its own. Here is an example of a repeater council that has acted to recognize the national weak-signal subband locally by voluntary band planning, but its efforts have been thwarted by some of the repeater owners. Indeed, one of the repeater groups that is refusing to move higher in the band at TSARC's request has filed comments in this proceeding, urging the Commission to allow the group's repeater to

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[3] See the comments of Thomas A. Richmond, at page 1.

remain in the weak-signal subband indefinitely![4]

This is an organization with a repeater input in the nationally recognized weak-signal subband, operating near the nation's most populous metropolitan area. The local repeater coordinator has adopted a band plan consistent with the national weak-signal subband--and reassigned this repeater to another frequency pair higher in the band. And yet, the sponsors of this repeater have gone on record in this proceeding in opposition to the Commission's proposed rule. In essence, they contend that moving to another frequency would be inconvenient. Clearly, they do not intend to move voluntarily.

It is difficult for the weak-signal community to avoid becoming impatient with repeater owners who consider nothing but their own convenience. The entire 220-220.5 MHz non-repeater subband was wiped out when 220-222 MHz was reallocated to the land mobile service. If all user groups were to share equally in the loss, the new non-repeater subband should be 222.0-222.3 MHz (twice the size of the non-repeater subband now proposed). But some repeater owners around the country would deny the weak-signal community even the proposed 150 kHz subband--so they can completely avoid sharing in the inconvenience made inevitable by the loss of 40 percent of the band.

It should be manifestly evident to the Commission now that not all repeater owners will voluntarily make accommodations for other amateurs. And like TSARC, other repeater coordinators will surely encounter resistance if they attempt to relocate repeaters out of the weak-signal subband without the clout of a federal rule to back them up. In the absence of a federal rule, some repeater systems will not budge, and there will be no uniform weak-signal subband where long-distance propagation experimentation can occur on

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[4] The Electronic Technology Society of New Jersey, a club with a Scotch Plains, NJ mailing address, filed a letter and an attendance sign-in sheet from a club meeting. The letter expressed opposition to the non-repeater subband on the ground that changing the frequency of the club repeater would be too burdensome.

a national and international basis.

3. Many comments--a majority of them virtually identical--were filed by users of a packet network in Northern California and Nevada. They want the proposed non-repeater subband to end at 222.130 kHz so their system can avoid a second frequency change.

WSVMS understands the plight of other users who have had to make adjustments since 220-222 MHz was reallocated to the land mobile service. Like the weak-signal community, the members of the Northern California/Nevada DX Packet Spotting Network have already been displaced once because of the reallocation. Their comments tell a compelling story of the frustrating technical and political challenges they have already endured. We can empathize because the weak-signal community has faced similar frustrations since 220-222 MHz was reallocated. But we believe that the needs of the weak-signal community and the needs of this packet network do not have to be mutually exclusive.

As ARRL noted in its comments,[5] this packet network would appear to be an ideal candidate for reaccommodation in the new 219-220 MHz band segment that the Commission has now proposed for secondary amateur use in a separate proceeding.[6] It is significant here that the Commission's proposal for a secondary allocation at 219-220 MHz will provide spectrum to accommodate packet links--but not weak-signal activities. Our only hope for access to the 1.25 meter band is the small subband at 222.0-222.150 MHz; we strongly oppose chopping off 20 kHz of that subband so that a packet network, no matter how legitimately aggrieved by what has already occurred, can avoid a second frequency

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[5] See the comments of the American Radio Relay League in this proceeding, at page 4 (footnote 5).

[6] WSVMS has noted, with some relief, that the Commission has proposed, in ET Docket No. 93-40, to establish a secondary amateur allocation at 219-220 MHz, for "packet backbone networks and other amateur point-to-point fixed communications," according to the Commission's release.

change. This packet network has somewhere else to go; we do not.

4. 220 SMA filed comments opposing the proposed non-repeater subband on 1.25 meters on the ground that the restoration of such a subband at 1.25 meters would be inconsistent with the Commission's Report and Order in PR Docket No. 85-22.[7]

We believe that SMA's reliance on PR Docket No. 85-22 is misplaced, and that SMA's quotation from the Report and Order in that docket is taken out of context. That proceeding was initiated because there had been an increase in complaints to the Commission concerning *repeater-to-repeater* interference, not interference between repeaters and weak-signal operators.[8] There were few if any complaints of interference between repeaters and weak-signal stations precisely because the two activities occurred in separate parts of each VHF-UHF band. Docket 85-22 did not even address the question of eliminating any of the non-repeater subbands. It was not Docket 85-22 but rather the reallocation to land mobile of 220-222 MHz, including the 220-220.5 MHz non-repeater subband, that led to ARRL's petition and this proceeding.

It is understandable that the Commission did not wish to dictate such matters as repeater spacing and offsets within the repeater subbands in Docket 85-22. The Commission wisely left such matters to the discretion of the amateur community and particularly to repeater coordinators. And the Commission determined that it would be in the public interest to require uncoordinated repeaters to bear the primary responsibility for resolving interference problems that arise between coordinated and uncoordinated repeaters.

Therefore, the Commission concluded that it was important for repeater coordina-

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[7] Comments of 220 Spectrum Management Association at page 5.

[8] Report and Order, PR Docket No. 85-22 at paragraph 6.

tors to "respond to the broadest base of local amateurs, and consider the concerns not only of repeater owners but also of those users of spectrum affected by repeater operation." The Commission further stated, "Their (coordinators') authority is derived from the voluntary participation of the entire amateur community; their recognition must be derived from the same source."[9]

In his comments in this proceeding, the President of SMA has conceded that SMA considered only the interests of its own members "without adequate consideration for the rights of others," as we noted earlier in these reply comments.[10] Because that can happen--and because even repeater coordinators that do consider the rights of others have no legal authority to reserve any portion of a band for non-repeater use--each VHF-UHF band must have a federally protected non-repeater subband. WSVMS believes that in the long run it would require far more of the Commission's limited resources to mediate interference complaints between repeaters and non-repeater stations on a case by case basis than it will to restore a federally protected non-repeater subband at 1.25 meters.

SMA also argued that if there is to be a non-repeater subband, it should be 110 kHz rather than 150 kHz. SMA, which coordinates repeaters only on 1.25 meters and only in Southern California, is the lone repeater coordinator anywhere in the United States that has opposed a 150 kHz non-repeater subband in this proceeding. For reasons that will be explained more fully later in these reply comments, we believe the record in this proceeding fully supports a nationwide 150 kHz non-repeater subband.

5. Several commenters who opposed the non-repeater subband indicated a lack of

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[9] Op. cit., at paragraph 25.

[10] See the Comments of James Fortney on behalf of the Valley Emergency Radio Association, at page 9.

understanding of both the nature and the history of weak-signal experimentation on 1.25 meters. As we pointed out in our original comments, weak-signal operation requires uniform national calling frequencies and DX windows.

Several commenters made observations similar to those of John K. Wilson,[11] who said, "the adjustment (to make space for weak-signal operations) should be made with due consideration to local conditions as opposed to the 'one size fits all' approach."

WSVMS wishes to say, in the most emphatic terms, that some amateur radio activities do require something akin to the "one size fits all" approach that commenter Wilson berates. In technical endeavors that require national or worldwide interoperability, uniform operating standards and procedures are necessary.

Weak-signal experimentation is such an international endeavor; ours is not just a local activity. As we and other commenters have explained, weak-signal operation by its nature requires internationally agreed-upon calling frequencies and DX windows. In those DX windows, weak-signal operators do far more listening than transmitting. In fact, local contacts in a DX window are frowned upon. To us, a quiet frequency is a prerequisite for long-distance communication; local chatter disrupts our objectives. But to those who use broadband modes for local communication, a quiet frequency is an unused frequency--a good place to put a repeater. As several commenters have pointed out in this proceeding, FM operators typically use omnidirectional vertically polarized antennas, as opposed to the highly directional horizontally polarized antennas we use. Often FM operaters simply cannot hear the weak, distant signals that we hear--and assume that there is no activity.

The majority of SSB/CW contacts on 1.25 meters span geographic regions served by more than one local repeater coordinator. If any local coordinator places repeaters in the

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[11] Comments of John K. Wilson of Rosamond, CA, at page 1.

nationally-recognized weak-signal subband (or if repeaters operate there without a coordinator's blessing--something that inevitably happens in the absence of federal regulation), weak-signal communication is severly impaired in that region. That is true not only because of the unacceptable level of mutual interference that results, but because some FM repeater operators will not tolerate SSB/CW operations near "their" frequency, even if the repeater is not in use. The comments of Joe Burke,[12] who has been an active weak-signal operator on 1.25 meters in Southern California for more than 30 years, describe interference problems typical of those encountered by weak-signal operators in the 1.25 meter band in Southern California recently. Given the potential for interference and ill will it would create, most weak-signal operators have maintained a low profile on 1.25 meters since we lost the 220.0-220.5 MHz non-repeater subband.

Commenter Wilson also reasserts the argument, made by some of those who commented on ARRL's original petition for restoration of the non-repeater subband at 1.25 meters, that under the Commission's proposed action, "15 repeater groups stand to be legislated out of existence." [13] As WSVMS has pointed out before, that is not what will happen. At worst, there will be some co-channeling of repeaters with less mileage separation than the repeater owners might prefer. But many of the co-channeled repeaters will be lightly used private systems: at least 50 of the 1.25 meter repeaters now operating in Southern California are closed or private systems.[14] As other commenters have pointed out in this proceeding, the time will come when not every private system can be given the

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[12] Comments of Joe Burke of Costa Mesa, CA at page 1 and 2.

[13] Comments of John K. Wilson, supra, at page 1.

[14] A count of the number of closed systems listed in the *ARRL Repeater Directory, 1992-93 edition*, will confirm that this is true. Nearly half of all Southern California 1.25 meter repeater systems are not open to the general amateur community. See pages 262-267.

exclusive use of 40 kHz of the 1.25 meter band, thus denying the vast majority of radio amateurs any right to use those frequencies. In view of the growing amateur population, frequency-sharing will be necessary at some point. This proceeding is not about legislating 15 repeater groups out of existence; it is about setting aside a small portion of the 1.25 meter band for use by all amateur stations except repeaters and auxiliary stations.

Commenter Gerald Boyd raised another issue that merits some response. He said that the ARRL petition to restore a non-repeater subband at 1.25 meters "demonstrates a serious lack of understanding of the historic and typical use of these frequencies."[15] WSVMS believes that it is not ARRL but commenter Boyd who may not be fully aware of the history of this band. As WSVMS member Wayne Overbeck demonstrated in the research paper that he attached to his comments in this proceeding, the history of weak-signal experimentation on 1.25 meters dates back to the 1930s.[16] In fact, for many years before the advent of 1.25-meter repeaters, weak-signal operating often occurred on 222 MHz rather than 220 MHz in order to minimize radar and channel 13 television interference problems.

Much of the pioneering 1.25 meter experimentation cited in Dr. Overbeck's paper occurred at 222 MHz. For example, the historic California-to-Hawaii contact in 1959 was made on 222 MHz, as was the first 1.25 meter moonbounce contact a decade later. In fact, there was serious SSB/CW activity at 222 MHz until the late 1970s, when the proliferation of repeaters made it impossible for weak-signal operators to use any portion of the band except the federally protected non-repeater subband at 220-220.5 MHz. If anyone has a valid historical claim to the 222.0-222.150 MHz band segment, it is the weak-signal

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[15] Comments of Gerald W. Boyd of Martinez, CA at page 1.

[16] See the comments of Wayne Overbeck of Tustin, CA, Appendix A.

community. We were there first.

6. Many commenters from all regions of the United States--and several from other countries--have endorsed the proposed non-repeater subband as absolutely necessary if 1.25 meter weak-signal communication is to continue on a national and international basis. These commenters include both major entities and individual amateurs.

WSVMS' sister weak-signal organization, the Central States VHF Society, said that 150 kHz is the minimum feasible size for a non-repeater subband. And Arthur Reis, the editor of the *220 NOTES* newsletter, stated the case for a non-repeater subband as follows:

> Without this nationwide weak signal window, effective amateur weak signal operations would not be possible. That the Commission has seen fit to designate such 'off-limits'areas in all other Amateur VHF and UHF bands is a tribute to the need and the efficacy of the practice.[17]

Of the comments supporting the non-repeater subband, perhaps the most persuasive are those of the American Radio Relay League, an umbrella organization whose 150,000 members represent every possible operating interest within the amateur radio service. ARRL originally proposed and continues to support a federally protected 150 kHz non-repeater subband on 1.25 meters.[18] The ARRL Board of Directors must consider the needs of every constituency within amateur radio, and ARRL noted that the restoration of a non-repeater subband at 222 MHz (albeit a very small one, consisting of only five percent of the band) would require the reassignment of some repeaters to other frequencies higher in the band. ARRL recognized that in some cases that might be difficult to accomplish. Even so, ARRL has taken the position that a small, nationally uniform subband for weak-

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[17] Comments of Arthur Reis of New Lenox, IL at page 1.

[18] Comments of the American Radio Relay League at pages 2-4.

signal and other non-repeater use is in the public interest.

WSVMS was also heartened to note that the Secretary of Defense, as Executive Agent of the National Communications System, filed comments endorsing the proposed non-repeater subband at 1.25 meters.[19] WSVMS believes that the experimental activities of radio amateurs have led to important contributions to the nation's emergency preparedness; we are delighted that the Secretary of Defense agrees and believes that such activities should be allowed to continue on a national basis. One good example of amateur experimentation that had national security implications was the early tropospheric ducting tests between California and Hawaii on 222 MHz.[20] That work could not be done today: repeaters fully occupy that part of the spectrum in Southern California now.

Finally, WSVMS wishes to call attention to the numerous comments filed by individual amateurs in support of the proposal to restore a non-repeater subband at 1.25 meters. Citing the continued importance of experimental activities--and the impossibility of engaging in weak-signal operations on frequencies occupied by repeaters--amateurs from many regions have appealed to the Commission to continue its long-standing practice of reserving a small portion of each VHF-UHF band for non-repeater activities.

CONCLUSION

For the foregoing reasons, the Western States VHF-Microwave Society again urges the Commission to adopt the proposed rule setting aside 222.0-222.150 MHz for use by all amateur stations except repeaters and auxiliary stations. We believe the record in this

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[19] Comments of the Manager of the National Communications System, filed on behalf of the Secretary of Defense, Executive Agent of the National Communications System (NCS), at pages 2-4.

[20] See Appendix A of the comments of Wayne Overbeck, supra, at pages 4-5.

proceeding amply demonstrates that a non-repeater subband within the 1.25 meter band is in the public interest, and that the objective of securing a uniform, nationwide subband is not attainable without Commission action. The record contains ample evidence that some repeater owners now operating in the nationally-recognized weak-signal subband will not move their systems to frequencies higher in the band voluntarily. And no one--not even the 220 Spectrum Management Association, the only repeater coordinator to file comments opposing a federal rule restoring a non-repeater subband--has suggested any means by which repeater coordinators can induce reticent repeater owners to relocate their systems to other frequencies in the absence of a federal rule. Nor has any commenter suggested a method by which uncoordinated repeaters--systems whose owners answer to no repeater coordinator whatsoever--can be prevented from taking over the weak-signal subband on 1.25 meters if it is not protected by federal regulation.

WSVMS requests that the Commission act as soon as possible to set aside 222.0-222.150 MHz for non-repeater, non-auxiliary operations, so that amateur experimentation on the 1.25 meter band can resume on a nationwide basis for the first time since we lost the 220-220.5 MHz non-repeater subband.

Respectfully submitted,
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March 19, 1993

CERTIFICATE OF SERVICE

I, James Steffen, certify that on this 23rd day of March, 1993, I caused copies of the foregoing "Reply Comments of the Western States VHF-Microwave Society" to be mailed first class, postage prepaid, to the following:

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